

REMARKS

By this paper, no claim amendments were made. Thus, Claims 1, 5-47, 56-59 and 63-69 remain pending and are presented for further examination.

I. Discussion of Claim Rejections Under 35 U.S.C. § 102(b)

In paragraph 3 of the Office action, the Examiner rejected Claims 1, 5-47, 56-69, and 63-69 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,548,809 to Lemson. In rejecting independent Claim 1, the Examiner stated that "Lemson discloses a method and system for allocating one or more portions of frequency spectrum among a plurality of radio frequency (RF) transmitters and/or receivers based on the demand and state of performance of one or more groups of RF transmitters and/or receivers (see col. 3, line 30 to col. 6, line 58, col. 7, line 45 to col. 9, line 40) as in claims 1, 5-47, 56-69, and 63-69." *O.A. at page 2.*

For the reasons below, the Applicant respectfully disagrees with the Examiner's determination, and submits that Lemson fails to anticipate the rejected claims.

A. Brief Description of Lemson

Lemson describes a radio communication system that shares a portion of the frequency spectrum with incumbent radio systems. *Lemson at col. 3, ll. 30-33.* The system identifies frequency band segments which correspond to receivers of an incumbent radio system having sufficient RF isolation from transmitters of an additional communication system. *Id. at col. 3, l. 64 through col. 3, l. 2.* A control system monitors available spectrum for allocating one or more ranges of transmission frequency to an ancillary radio stations. *Id. at col. 4, ll. 41-46.* The ranges of frequency are allocated to prevent the ancillary radio stations from interfering with received signals of an incumbent radio system which shares frequency space with the ancillary radio stations. *Id. at col. 3, ll. 30-33.* The monitored information is "indicative of the presence and location of an incumbent radio system, wherein the information includes a plurality of levels and frequencies of radio signals which are located within the frequency range of the incumbent radio system." *Id. at col. 4, ll. 53-58.* Lemson also describes a device that periodically measures "levels of signals across an entire frequency band of interest utilized by the ancillary communications network." *Id. at col 5, ll. 1-3.* Lemson describes "allocating one or more

frequency ranges within which the ancillary communications network can transmit signals without interfering with received signals of the incumbent radio system.” *Id.* at col.6, ll. 20-33. More particularly, a processor determines the probability that a mobile network (MN) 12 will interfere with the nearby incumbent radio system, and furnishes a list of frequency channel segments which are available for use by each microcell cluster 13. *Id.* at col. 8, ll. 55-59; see *Fig. 1*. A channel assignment algorithm assigns user channels to terminals 16 within each microcell 14, based upon the available channel list, and based upon subscriber demand. *Id.* at col. 8, ll. 59-64.

B. The Law of Anticipation

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985). More particularly, a finding of anticipation requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention. *Electro Med. Sys. S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1052 (Fed. Cir. 1994). “To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim.” *Brown v. 3M*, 265 F.3d 1349 (Fed. Cir. 2001). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

C. Discussion of Distinctions of the Claims in View of Lemson

In supporting the rejection of the claims, the Examiner simply cited to nearly seven columns of the Lemson patent, without citation to any particular statement(s) in Lemson that support each particular limitation of rejected Claims 1, 5-47, 56-69, and 63-69. More particularly, the Examiner did not particularly point out where or how Lemson teaches or suggests all of the limitations of the rejected claims. Nevertheless, the Applicant submits that Lemson fails to teach or suggest all of the limitations of the rejected claims.

As noted above, Lemson discloses a control system that monitors available spectrum for allocating one or more ranges of transmission frequency to an ancillary radio stations. *Lemson* at col. 4, ll. 41-46. Lemson’s monitored information is “indicative of the presence and location of an incumbent radio system, wherein the information includes a plurality of levels and frequencies of radio signals which are located within the frequency range of the incumbent radio system.” *Id.*

at col. 4, ll. 53-58. On the other hand, Claim 1 recites a method comprising "determining, in response to the monitored communication parameter, a state of performance of the group." The Applicant submits that Lemson fails to disclose determining, in response to the monitored communication parameter, a state of performance of the group of RF transmitter/receivers, as recited in Claim 1. Lemson's system merely determines which frequencies are in use from "presence and location of an incumbent radio system" to allocate frequency ranges to another communication network. Lemson's systems does not determine a state of performance in response to the monitored parameter. Thus, Lemson fails to disclose the "determining" step of Claim 1.

Further, Lemson fails to disclose "allocating at least a portion of the RF spectrum from the group having best state of performance to at least one of the plurality of RF transmitters and receivers," as recited in Claim 1. The Lemson device periodically measures levels of signals across a frequency band of interest utilized by the ancillary communications network to allocate frequency ranges within which the ancillary communications network can transmit signals without interfering with received signals of the incumbent radio system. *Id.* at col 5, ll. 1-3 and col. 6, ll. 20-33. Thus, the Lemson system merely allocates frequency ranges to avoid frequency interference between two communication networks, i.e., the ancillary network and the incumbent radio system. Lemson does not disclose, and the Examiner did not point out where or how Lemson discloses, allocating at least a portion of the RF spectrum from the group having best state of performance, as recited in Claim 1. Nowhere does Lemson teaches or suggests allocating a portion of the RF spectrum from the group having best state of performance because, in fact, the Lemson system does not determine or evaluate information indicative of RF radios having the best performance. Thus, Lemson fails to teach or suggest all of the limitations of Claim 1.

Since independent Claims 56 and 63 include at least the patentable distinctions recited in Claim 1, the Applicant submits that Claims 56 and 63 are also patentable. Since each of Claims 5-14, 57-58 and 64-65 depends either directly or indirectly on one of Claims 1, 56 and 63, the Applicant submits that those claims are also allowable.

With respect to independent Claim 15, the Applicant submits that Lemson fails to, and the Examiner did not explain where and how does Lemson, teach or suggest determining relative data congestion, or allocating at least a portion of the RF spectrum from the group having least amount of congestion to at least one other RF transmitter, as recited in Claim 15. Further to the discussion of Lemson in connection with Claim 1 above, the Applicant notes that the Lemson

system does not determine the relative data congestion, but merely allocates based on a probability that a mobile network (MN) 12 will interfere with the nearby incumbent radio system, and furnishes a list of frequency channel segments which are available for use by each microcell cluster 13. *Lemson at col. 8, ll. 55-59; see Fig. 1.* By avoiding interference, the Lemson system simply allocates "available" channel segments based on use of channels by the "incumbent radio system", whether or not relative data congestion is experienced by the incumbent radio system. Moreover, the Lemson system provides no indication as to whether any of the RF transmitters are "least" congested, because no congestion data is assessed or analyzed by the Lemson system. Thus, the Lemson does not disclose, and the Examiner did not point out where or how Lemson discloses, allocating at least a portion of the RF spectrum from the group having least amount of congestion, as recited in Claim 15. Lemson simply fails to teach or suggest all of the limitations of Claim 15.

Since independent Claims 24 and 66 include at least the patentable distinctions recited in Claim 15, the Applicant submits that Claims 24 and 66 are also patentable. Since each of Claims 16-23 and 25-32 depends either directly or indirectly on one of Claims 15 and 24, the Applicant submits that those claims are also allowable.

With respect to Claim 33, the Applicant submits that Lemson fails to, and the Examiner did not explain where and how does Lemson, teach or suggest a system comprising RF transmitters configured to transmit data representing respective demand to communicate data, as recited in Claim 33. Further to the discussion of Lemson in connection with Claim 1 above, the Applicant notes that the Lemson system does not teach or suggest a system comprising a receiver configured to re-allocate a portion of the RF spectrum from the group of RF transmitters having smallest demand to at least one other RF transmitter, as recited in Claim 33. By avoiding interference, the Lemson system simply allocates "available" channel segments merely based on use of channels by the "incumbent radio system", whether or not an RF transmitter having smallest demand is present or not. Thus, Lemson simply fails to teach or suggest all of the limitations of Claim 33.

Since independent Claim 67 includes at least the patentable distinctions recited in Claim 33, the Applicant submits that Claim 67 is also patentable. Since each of Claims 34-47 depends

either directly or indirectly on Claim 33, the Applicant submits that those claims are also allowable.

With respect to Claim 68, the Applicant submits that Claim 68 is allowable for at least some of the reasons presented above. Additionally, Lemson fails to, and the Examiner did not explain where and how does Lemson, teach or suggest groups of transmitters operating at different average data rates, and adjusting the demand based at least in part on a quality of service that is commensurate with each transmitter, as recited in Claim 68. Thus, Claim 68 is also allowable.

In view of the foregoing discussion, the Applicant submits that Lemson fails to anticipate all of the limitations of the rejected claims as required by law.

II. Discussion of Claim Rejections Under 35 U.S.C. § 102(b)

In paragraph 3 of the Office action, the Examiner rejected Claims 1, 5-47, 56-69, and 63-69 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,818,830 to Daane et al. In rejecting independent Claim 1, the Examiner stated that "DAANE et al. also discloses a method and system for allocating one or more portions of frequency spectrum among a plurality of radio frequency (RF) transmitters and/or receivers based on the demand and state of performance of one or more groups of RF transmitters and/or receivers (see col. 2, lines 32-44, col. 3, line 64 to col. 6, line 8) as in claims 1, 5-47, 56-69, and 63-69." *O.A. at page 2.*

For the reasons below, the Applicant respectfully disagrees with the Examiner's determination, and submits that Daane fails to anticipate the rejected claims.

A. Brief Description of Daane

Daane describes a wireless communication system for Time Division Multiple Access network, wireless Ethernet, and Frequency Division Multiplexed network. *Daane at col. 2, ll. 41-44.* The Daane system includes a network manager 12 for allocating RF bandwidth among computer devices 14, 16, 18, and 20 on downlink/uplink frequencies. *Id. at col. 3, ll. 64-66; col. 5, ll. 37-41; Fig. 1.* The network manager 12 receives bursts from such devices, the bursts comprising data, which the network manager 12 places in respective destination queues. *Id. at col. 4, ll. 1-12.* The network manager 12 determines which device is ready to receive information, e.g., if the printer 20 is not ready to receive information (because its buffer is full,

for example), its queue will be assigned a low priority. *Id.* at col. 4, ll. 13-20. This will allow the bandwidth to be allocated to the other devices 14, 16, and 18. *Id.* at col. 4, ll. 20-22. In step 110, the network manager 12 examines the levels of the queues, and assigns a high priority to a queue that is approaching overflow. *Id.* at col. 4, ll. 23-25. Allocating extra bandwidth to a device will allow its corresponding queue to be emptied faster. *Id.* at col. 4, ll. 25-28.

B. Discussion of Distinctions of the Claims in View of Daane

In supporting the rejection of the claims, the Examiner did not provide an explanation of how and where each claim limitation is disclosed in Daane. Nevertheless, the Applicant submits that Daane fails to teach or suggest all of the limitations of the rejected claims. The Applicant incorporates herein the distinctions of the claims discussed in connection with the Lemson patent above. Additionally, the Applicant provides below particular remarks about patentable distinctions recited in the independent claims.

As noted above, the network manager 12 of Daane receives bursts from computer devices, the bursts comprising data, which the network manager 12 places in respective destination queues. *Id.* at col. 4, ll. 1-12. The network manager 12 examines the levels of the queues, and assigns a high priority (i.e., extra bandwidth) to a queue that is approaching overflow. *Id.* at col. 4, ll. 23-25. On the other hand, Claim 1 recites a method comprising monitoring a communication parameter that relates to performance of a group within a plurality of RF transmitters and receivers and allocating at least a portion of the RF spectrum from the group having best state of performance. The Applicant submits that Daane fails to teach or suggest such noted limitations of Claims 1, 56 and 63. More particularly, Daane's network manager 12 monitors queue levels, which is not a communication parameter relating to performance of the RF transmitters/receivers. It is axiomatic that a queue relates to or is limited by characteristics of available buffer or storage capacity, independent of the conditions of the communication over the RF channel. Furthermore, there is no teaching or suggestion that Daane's network manager 12 allocates RF spectrum from the RF device having the best queue status (e.g., most available queue).

With respect to Claims 15, 24, and 66, the Applicant submits that Daane fails to disclose all of the limitations of these claims because, *inter alia*, Daane's network manager 12 examines queue levels, but fails to determine "relative data congestion of the group of transmitters" as

recited in Claims 15, 25, and 66. Any determination of congestion in Daane relates to overflow status of queues (which is at best indicative of the congestion of receiving/destination devices, e.g., printer), but does not relate to relative data congestion of the group of transmitters, as recited in Claims 15, 24, and 66. With respect to Claims 33, 67, and 68, the Applicant particularly submits the patentable distinctions discussed in connection with Lemson above as applied to those claims. Since all independent claims are allowable, the Applicant submits that their respective dependent claims are also allowable.

In view of the foregoing discussion, the Applicant submits that Daane fails to anticipate all of the limitations of the rejected claims as required by law.

III. CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the Office Action. Further, Applicant submits that the claim limitations discussed above represent only illustrative distinctions. Hence, there may be other patentable features that distinguish the claimed invention from the prior art.

The Examiner is reminded that "whenever, on examination, any claim for a patent is rejected, or any objection ... made, notification of the reasons for rejection and/or objection together with such information and references as may be useful in judging the propriety of continuing the prosecution (35 U.S.C. 132) should be given." *M.P.E.P.* § 707. The Applicant submits that the Examiner's summary rejection of the claims, without citing to specific portion(s) of the above references, amounts to depriving the applicant of the opportunity to respond completely and with particularity as to why the claims are patentable. Thus, if the Examiner wishes to sustain the rejection of the claims based on the same reference(s), the Examiner is requested to "clearly articulate any rejection early in the prosecution process so the applicant has the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity." *See M.P.E.P.* § 706. More particularly, the Examiner is requested to provide the Applicant with specific citations to the reference(s) and to explain where and how the reference(s) anticipates each claim limitation. If so, the Applicant should be entitled to have at least one opportunity to respond without having the burden of filing a request for continued examination (RCE).

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections and, particularly, that all claims be allowed. If the Examiner finds any

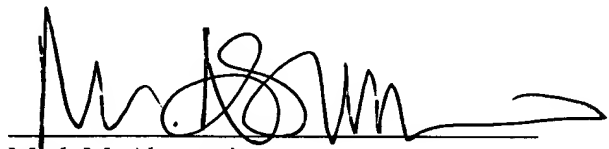
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remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully invited to call the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,
KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: September 22, 2003

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